

REDEMPTION SYSTEMS AND METHODS WHEREIN A BUYER
TAKES POSSESSION AT A RETAILER OF A PRODUCT PURCHASED
USING A COMMUNICATION NETWORK

5 CROSS-REFERENCE TO RELATED APPLICATIONS

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09/337,906
The present application is a continuation-in-part of U.S. Patent Application Serial
No. 09/337,345 filed June 22, 1999 and entitled "Purchasing Systems and Methods
Wherein a Buyer Takes Possession at a Retailer of a Product Purchased Using a
10 Communication Network" (99-013), which is a continuation-in-part of U.S. Patent
Applications Serial No. 08/889,503 filed July 8, 1997 and entitled "System and Process for
Local Acquisition of Products Priced Online" (97-032); Serial No. 08/889,319 filed July 8,
1997 and entitled "Conditional Purchase Offer Management System" (96-008X); Serial
No. 09/190,744 filed November 12, 1998 and entitled "Method and Apparatus for A
15 Cryptographically Assisted Commercial Network System Designed to Facilitate Buyer-
Driven Conditional Purchase Offers" (96-008XXX), which is a continuation of U.S. Patent
Number 5,794,207, filed September 4, 1996; and Serial No. 09/083,345 filed May 22,
1998 and entitled "Method and Apparatus for Managing Remote Vending Machine
Transactions" (97-554). The entire contents of these applications are hereby incorporated
20 by reference.

09/337,906
The present application is also related to the subject matter of U.S. Patent
Applications Serial No. 08/943,483 filed October 3, 1997 and entitled "System and
Method for Facilitating Acceptance of Conditional Purchase Offers" (97-072); Serial No.
08/858,738 filed May 19, 1997 and entitled "System and Process for Issuing and
25 Managing Forced Redemption Vouchers Having Alias Account Numbers" (96-139); and
Serial No. 08/997,680 filed December 23, 1997 and entitled "Method and Apparatus for
Issuing and Managing Gift Certificates" (96-139X). The entire contents of these
applications are hereby incorporated by reference.

FIELD OF THE INVENTION

The present invention relates to the sale of products. In particular, the present invention relates to redemption systems and methods wherein a buyer takes possession at a retailer of a product purchased using a communication network.

BACKGROUND OF THE INVENTION

Typically, a buyer visits one or more retailers to shop for a product. When the buyer finds the product he or she is looking for, at a reasonable price, the buyer purchases the product from the retailer. This traditional method of providing products to buyers, however, may require that the buyer visit a number of retailers to determine what should be considered a reasonable price for the product.

Moreover, the traditional method of selling a product to a buyer requires that a retailer attract buyers, such as by spending money on advertising. For example, when a new retail store opens for business, many buyers will not know what products the store sells. In addition, traditional methods do not let a product manufacturer establish a pricing relationship directly with buyers when the product is provided to buyers through one or more retailers. For example, a manufacturer may sell a product to a retailer (perhaps through a distributor) that ultimately decides the price at which the product is sold to buyers. A manufacturer may also provide a manufacturer's rebate or coupon to a buyer. Such a rebate or coupon, however, typically does not completely bypass the retailer's pricing structure (e.g., the buyer may receive a 10% discount from the retail price of a product).

Recently, products have been sold to buyers through communication networks, such as with online transactions completed through the Internet. Internet sales have been growing steadily over the past few years, and are expected to continue increasing because buyers are attracted to the ease and convenience of shopping online. For example, a buyer can shop online from the comfort of home at any time of day or night.

Another advantage of online shopping is that pricing comparisons are less time consuming. For example, a Web service can compile prices from various sources (e.g., Web merchants and/or retail stores that are not online) for various products. This lets a

buyer easily find and select, for example, a retail store that offers the lowest price for a product. Although this will save a buyer time, only regular retail prices (which the buyer would eventually be able to find without the Web site) are typically reported - without providing any other pricing advantage. As price information becomes more accessible, buyers are growing more price sensitive and demand that products be sold at lower prices.

Having a product shipped to a buyer, which is the conventional mode of delivering a product purchased online, presents several drawbacks. For example, many buyers are not home during the day and cannot sign for, or otherwise arrange to receive, the product from a delivery service. In addition, the shipping service itself presents an additional cost that, depending on the product, may offset any savings made possible by shopping online. Finally, some products simply cannot be delivered at all, such as a service provided to buyers.

With respect to a buyer, another disadvantage of online shopping is the delay involved with receiving a product. The online shopping community has not effectively captured the impulsive and impatient buyer market, because a buyer is more likely to impulsively purchase a product when he or she can take immediate possession (instead of waiting several days for delivery). In other words, a buyer who wants a product immediately is likely to visit a retailer and not buy the product online.

With respect to retail stores that are not online, online shopping presents additional problems. For example, the store is typically left completely out of any online shopping transaction. In addition to losing the potential profit from the sale of the product itself, the store loses any chance of selling the buyer additional items during a visit, such as complementary products or even unrelated items that attract the buyer's attention while he or she is in the store. This would still be a problem even if the store invested the time and money required to establish an online shopping service. Moreover, the store's online service may simply shift sales that would have otherwise occurred at the actual store (as opposed to attracting new buyers).

With respect to manufacturers, the availability of online shopping does little to solve the problem of establishing a pricing relationship directly with buyers. Some manufacturers have attempted to establish such a relationship by establishing an online shopping service. However, manufacturers that establish such a service compete directly with their retailer's traditional distribution channel and therefore risk alienating retailers that also sell the manufacturer's product. Additionally, establishing such a service requires

a manufacturer to take on additional cost and responsibility in attracting and servicing customers directly.

In U.S. Patent Application Serial No. 09/337,345 filed June 22, 1999 and entitled "Purchasing Systems and Methods Wherein a Buyer Takes Possession at a Retailer of a Product Purchased Using a Communication Network" (99-013) applicants disclose methods and systems wherein a purchasing system solves many of the problems discussed above. However, when a buyer purchases a product using such a purchasing system, a need exists for further systems and methods to facilitate the process of the buyer taking possession of the product at a retailer.

SUMMARY OF THE INVENTION

To alleviate the problems inherent in the prior art, and to facilitate the process of a buyer taking possession of the product at a retailer, the present invention introduces redemption systems and methods wherein a buyer takes possession at a retailer of a product purchased using a communication network.

In one embodiment of the present invention, a retailer receives redemption information from a buyer, such as a pseudo payment identifier redemption code. The retailer also receives verification information from a purchasing system, the verification information enabling the retailer to authorize the buyer to take possession of a product. The retailer provides the product to the buyer and receives, from a party different than the buyer, a payment in exchange for providing the product to the buyer.

With these and other advantages and features of the invention that will become hereinafter apparent, the nature of the invention may be more clearly understood by reference to the following detailed description of the invention, the appended claims and to the several drawings attached herein.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1A is a block diagram overview of a system in which a buyer takes possession of a product at a retailer according to an embodiment of the present invention.

FIG. 1B illustrates a purchasing system voucher according to an embodiment of the present invention.

FIG. 2 is a block schematic diagram of a buyer device according to an embodiment of the present invention.

FIG. 3 is a block schematic diagram of a purchasing system device according to an embodiment of the present invention.

5 FIG. 4 is a block schematic diagram of a point of sale controller according to an embodiment of the present invention.

FIG. 5 is a block schematic diagram of a point of sale terminal according to an embodiment of the present invention.

10 FIG. 6A and 6B are a tabular representation of a portion of an accepted offer database according to an embodiment of the present invention.

FIG. 7 is a tabular representation of a portion of a seller database according to an embodiment of the present invention.

FIG. 8 is a tabular representation of a portion of a retailer database according to an embodiment of the present invention.

15 FIG. 9 is a tabular representation of a portion of a supplemental product offer rules database according to an embodiment of the present invention.

FIG. 10 is a tabular representation of a portion of a supplemental product offer status database according to an embodiment of the present invention.

20 FIG. 11 is a tabular representation of a portion of a redemption identifier database according to an embodiment of the present invention.

FIG. 12 is a tabular representation of a portion of a retailer redemption identifier database according to an embodiment of the present invention.

FIG. 13 is a tabular representation of a portion of a pricing database according to an embodiment of the present invention.

25 FIG. 14 is a tabular representation of a portion of a transaction database according to an embodiment of the present invention.

FIGS. 15A and 15B are a flow charts illustrating a general registration method according to an embodiment of the present invention.

30 FIGS. 16A and 16B are flow charts illustrating a registration method according to another embodiment of the present invention.

FIG. 17 is a flow chart illustrating a supplemental offer rules evaluation method according to an embodiment of the present invention.

FIGS. 18A to 18D are flow charts illustrating a point of sale redemption method according to an embodiment of the present invention.

FIGS. 19A to 19C are flow charts illustrating a price adjustment method according to an embodiment of the present invention.

5 FIG. 20 is a flow chart illustrating a redemption validation method according to an embodiment of the present invention.

FIG. 21 is a flow chart illustrating a redemption validation method according to an embodiment of the present invention.

10 FIG. 22 is a flow chart illustrating another redemption validation method according to an embodiment of the present invention.

FIG. 23 is a flow chart illustrating another redemption validation method according to an embodiment of the present invention.

FIGS. 24A and 24B are flow charts illustrating a supplemental offer validation method according to an embodiment of the present invention.

15 FIG. 25 is a flow chart illustrating a redemption validation method that may be performed by the retailer according to another embodiment of the present invention.

FIG. 26 is a flow chart illustrating the collection and disbursement of payment with respect to a buyer that may be performed by the retailer according to another embodiment of the present invention.

20 FIGS. 27A and 27B are flow charts illustrating a method of processing a purchasing system transaction that may be performed by the retailer according to another embodiment of the present invention.

25 FIGS. 28A and 28B are flow charts illustrating a method of processing a purchasing system transaction that may be performed by the retailer according to another embodiment of the present invention.

FIGS. 29A and 29B are flow charts illustrating a method of adjusting a price paid by a buyer that may be performed by the purchasing system according to another embodiment of the present invention.

30 FIGS. 30A and 30B are flow charts illustrating a method of processing a purchasing system transaction that may be performed by the purchasing system according to still another embodiment of the present invention.

FIGS. 31A and 31B are flow charts illustrating a method of processing a purchasing system transaction that may be performed by the retailer according to yet another embodiment of the present invention.

5 DETAILED DESCRIPTION OF THE INVENTION

The present invention is directed to redemption systems and methods wherein a buyer takes possession of a product at a retailer. Turning now in detail to the drawings, FIG. 1A is a block diagram overview of a redemption system 10 according to one
10 embodiment of the present invention. The system 10 includes a buyer device 200 coupled to a purchasing system device 300. The devices may be coupled, for example, through a communication network. As used herein, a "communication network" may be, for example, a Local Area Network (LAN), a Wide Area Network (WAN), a Public Switched Telephone Network (PSTN), or an Internet Protocol (IP) network such as the Internet, an
15 intranet or an extranet. Moreover, as used herein, communications include wireless protocols, such as those enabled by cellular, satellite, or radio technology.

In one embodiment of the present invention, the buyer device 200 communicates with a remote Web-based purchasing system device 300 (e.g., a server) through the Internet. Although embodiments of the present invention will be described with respect to
20 information exchanged using a Web site, according to other embodiments of the present invention information may instead be exchanged using, for example: a telephone; a facsimile machine; e-mail; a WEBTV® interface; a cable network interface; and/or a wireless device. Information exchanged between a buyer and the purchasing system device 300, as well as between a retailer and the purchasing system device 300, may also
25 use a Voice Response Unit (VRU) or Interactive VRU (IVRU). Examples of IVRUs include the Vision 2001 and the Insight IVR/Web from Interactive Voice Technologies, Corp. and the OmniVox for Windows NT from APEX Voice Communications. In general, an IVRU lets a user of a DTMF (Dual Tone Multi-Frequency) tone generating telephone, also known as "push button" telephone, communicate with a computer. The
30 DTMF signals received from a user's telephone are interpreted by the IVRU, which also communicates with the user by generating and transmitting voice or other audio signals, such as a list of IVRU menu options.

A buyer device 200 may be, for example, a Personal Computer (PC), a Personal Digital Assistant (PDA), a wired or wireless telephone, a one-way or two-way pager, a kiosk, an Automated Teller Machines (ATM), a watch enabled to communicate through a network, or any other appropriate communication device.

5 According to one embodiment of the present invention, the purchasing system device 300 receives a buyer offer, including a buyer-defined offer price, related to a product to be purchased. The buyer offer may be "binding" in that a buyer cannot revoke an offer that has been accepted by a seller. One example of a buyer offer, called a Conditional Purchase Offer (CPO), is described in U.S. Patent No. 5,794,207 and U.S.
10 Patent Application Serial No. 08/889,319, the entire contents of which are hereby incorporated by reference. A CPO may be, for example, an electronic message from a buyer including an offer price for a product. If a seller agrees to the CPO, the buyer pays the offer price to the purchasing system, and the product is provided to the buyer by a retailer. The purchasing system, in turn, provides a payment to the retailer for providing
15 the product to the buyer. Such a payment to the retailer will be referred to herein as a "settlement" price or amount, and may be equal to, less than or more than the retail price the retailer typically charges customers for the product.

In addition to an offer price, the buyer offer can include other information, such as a product category, a product class, a product manufacturer and model number, or at least
20 one product feature. For example, the buyer offer may indicate that the buyer will pay \$500 (the offer price) for a television (the product category) made by a well-respected manufacturer and having a 32 inch screen (the product class) and surround sound (a product feature).

Note that, according to different embodiments of the present invention, a
25 purchasing system price can be established using any method, such as by having the purchasing system offer the buyer a particular product for a particular price (e.g., a particular model television for \$200). According to one embodiment of the present invention, the purchasing system may offer the buyer a product having certain characteristics (selected, for example, by the buyer or the purchasing system) for a
30 particular price (e.g., a 31 inch screen television with surround sound for \$300) while leaving other features unspecified (e.g., a product manufacturer).

According to one embodiment of the present invention, the purchasing system device 300 arranges for the buyer to purchase the product from a "seller," such as a

product manufacturer, a retailer, the purchasing system or any other party. The purchasing system device 300 also arranges for the buyer to take possession of the product at a retailer.

It should be noted that, as used herein, a "product" may be, for example, a new or used consumer product such as an electronic device. A product may also be any other good or service that a buyer can take possession of at a retailer. In the case of a service, the product may be, for example, a car tune-up that the buyer "takes possession of" at (i.e., receives the service from) a car service center. A product may also be a package of multiple items and/or services. For example, a product may be a television and a Video Cassette Recorder (VCR). In this case, the purchasing system could arrange for the buyer to take possession of both items at a single retailer or at different retailers. U.S. Patent Application Serial No. 08/923,683 filed September 4, 1997 and entitled "Conditional Purchase Offer (CPO) Management System for Packages" (97-065), the entire content of which is hereby incorporated by reference, discloses methods of providing packages of products to buyers.

As used herein, a "retailer" may be any entity capable of providing a product to a buyer. For example, a retailer might be a single retail shop, a chain of consumer electronic "superstores," one or more retail stores within a chain, a franchisee, a franchiser, a distributor, or even a warehouse where products are stored.

According to an embodiment of the present invention, the buyer pays the purchasing system in exchange for the right to take possession of the product at the retailer. The retailer receives a payment, which may or may not be based on the amount paid by the buyer, from a party other than the buyer, such as the purchasing system or product manufacturer, in exchange for providing the product to the buyer.

In another embodiment of the present invention, the purchasing system device 300 communicates with the buyer device 200 to establish a first price for a product between the buyer and a seller. The purchasing system device 300 also arranges for the buyer to take possession of the product at a retailer, different than the seller, that offers the product for sale at a second price. Verification information, which enables the retailer to authorize the buyer to take possession of the product, is transmitted from the purchasing system device 300 to a retailer. The verification information may be, for example, a "one way hash" function transmitted to the retailer (either once or periodically). Applicable functions are described in Bruce Schneier, "Applied Cryptography: Protocols, Algorithms, and Source

Code in C" (John Wiley & Sons, Inc., 2nd Ed. 1996). The retailer may then evaluate a redemption code provided by the buyer, using the one way hash function, to determine if the buyer is authorized to take possession of the product.

The verification information may also be, for example, a response to information (sent from the retailer device 400 to the purchasing system device 300) about an attempt to take possession of a product, or a batch of authorized codes sent to the retailer device 400 each night. The buyer provides a payment, based on the first price, to the purchasing system in exchange for the right to take possession of the product at the retailer. The purchasing system, in turn, provides a payment (e.g., the settlement price) to the retailer for allowing the buyer to take possession of the product.

According to another embodiment of the present invention, the purchasing system device 300 arranges for a buyer to purchase a product and transmits redemption information, including a "redemption code," to the buyer device 200. As used herein, a "redemption code" may be, for example, a unique alphanumeric sequence of digits. In general, however, the redemption code may be anything capable of representing, such as a one or two dimensional bar code, the right of the buyer to take possession of the product at a retailer. As used herein, the phrase "bar code" includes any machine-readable information. The redemption code can also include information about the transaction, such as the buyer's identity, a product identifier, a price or an applicable tax rate. In addition, the redemption information can also include information that enables the creation of a voucher. For example, a printer attached to the buyer device 200 may be used to print a coupon-like voucher including the redemption code.

According to still another embodiment of the present invention, information related to an attempt to take possession of the product, including the redemption code, is sent from the retailer device 400 to the purchasing system device 300. In this case, the purchasing system device 300 responds with verification information authorizing the buyer to take possession of the product. Those skilled in the art will recognize that the purchasing system device 300 may communicate with the buyer device 200 and the retailer device 400 through different communication networks.

A more detailed description of one embodiment of the present invention will now be provided. The purchasing system device 300 arranges for the buyer to purchase the product, for example, when a buyer offer is received from the buyer device 200 through

the Internet. The purchasing system device 300 may or may not route information about the buyer offer to, for example, a number of seller devices 500.

Based on the buyer offer (such as a price, a product category and a product class), the purchasing system device 300 may select a particular product (such as a product manufacturer and model number) from a plurality of possible products. In addition to the buyer offer, the purchasing system device 300 may consider other factors when selecting a particular product, such as, for example: (i) the expected availability of products at retailers; (ii) the actual availability of product at retailers – which may be done by communicating with the retailer devices 400; (iii) retail prices of products at various retailers – which again may be done by communicating with the retailer devices 400; (iv) subsidy information associated with products; and (v) retailer settlement prices. As used herein, a “subsidy” may be, for example, an amount a party (such as a manufacturer, a retailer or the purchasing system) is willing to contribute towards the buyer’s purchase of a product. A subsidy may also be, for example, an amount a party is willing to contribute towards the sale of a product (or a number of different products) to a number of buyers.

By way of example, consider a buyer who sends the purchasing system device 300 an offer to purchase a 35 millimeter (mm) camera for \$150. The purchasing system device 300 and/or the seller devices 500 may determine that cameras produced by two different manufacturers can be used to fulfill the buyer’s offer. Both cameras are available at a retailer for the same settlement price of \$175. One of the manufacturers, however, has agreed to provide a \$35 manufacturer subsidy for each camera sold. In this case, the purchasing system device 300 may select the camera produced by that manufacturer to accept the buyer’s offer and realize a \$10 gain (i.e., the buyer’s offer price of \$150 less the retailer’s settlement price of \$175 plus the manufacturer subsidy of \$35).

The purchasing system device 300 may likewise select one or more retailers from a plurality of possible retailers. In this case, the purchasing system device 300 may consider, for example: (i) the geographic location of the buyer; (ii) the geographic location of the retailers; (ii) the expected availability of the product at various retailers; (iii) the actual availability of the product at various retailers; (iv) retail prices of the product at various retailers; (iv) retailer subsidy information; and (v) retailer settlement prices.

To determine whether or not the buyer offer is acceptable and/or how the buyer offer will be accepted (e.g., which product at which retailer), the purchasing system device 300 may compare the offer price with one or more settlement prices associated with a

product that successfully meets the buyer's offer information. A settlement price may be, for example, the amount that must be provided to a retailer by the purchasing system in exchange for providing a product to a buyer. A potential seller may also have a minimum acceptable price, which is the lowest price that the seller (as opposed to the retailer) will let the product be sold for (e.g., to prevent brand name dilution). In making this comparison, the purchasing system device 300 may also take into account supplemental price information, such as a manufacturer subsidy amount, a retailer subsidy amount, a purchasing system subsidy amount, and/or a "third-party" subsidy amount associated with the product. As used herein, a third-party subsidy amount may be, for example, an amount that a third-party agrees to provide in exchange for a promise regarding, an action by, or information about the buyer. For example, a credit card issuing bank may agree to add \$50 towards the purchase of a home stereo if a buyer submits a credit card application. See, for example, U.S. Patent Application Serial No. 08/943,483 filed October 3, 1997 and entitled "System and Method for Facilitating Acceptance of Conditional Purchase Offers" (97-072) and U.S. Patent Application Serial No. 09/219,267 filed December 23, 1998 and entitled "Method and Apparatus for Facilitating Electronic Commerce Through Providing Cross-Benefits During a Transaction." The entire contents of these applications are hereby incorporated by reference.

According to embodiments of the present invention, the purchasing system device 300 also arranges for the buyer to take possession of the product at a retailer. This may be done, for example, by sending to the buyer redemption information, including a redemption code such as a "pseudo" credit card number, debit card number or a checking account number. A redemption code may be a "pseudo" credit card number if, for example, it can be entered into (and processed by) a retailer device, such as a Credit Authorization Terminal (CAT), in the same manner as a traditional credit card number. The redemption information can also include a condition that must be met by the buyer, such as a geographic limitation or an expiration date. Penalty information, such as a 10% increase in the price of the product, may also be included in the event the buyer violates a condition associated with the sale. The redemption information can also enable the creation of a coupon-like voucher. For example, the redemption information may let the buyer print a voucher that can be presented to the retailer when taking possession of the product.

Note that the redemption information may include information associated with a number of products, as well as a number of retailers. For example, a single voucher might indicate that the buyer can take possession of a VCR at either of three local retailers. In this case, the voucher may be redeemable for one of several different products, depending on the retailer at which the buyer takes possession of the product. Accordingly, the redemption information (e.g., a voucher), may include several different Stock Keeping Unit (SKU) numbers, model names and/or model numbers. According to another embodiment, the voucher may include several separate products (e.g., a television or a VCR) or several equivalent products (e.g., several different television brands, more than one of which may be available at a single retailer). The redemption information may also enable the creation of multiple vouchers. The multiple vouchers may each include the same redemption code or different redemption codes. For example, if the buyer can only redeem one of the vouchers there can be a single redemption code. However, if the buyer can redeem more than one voucher for more than one product (e.g., the buyer purchased a package or combination of products) each voucher may have a different redemption code corresponding to each of the products the buyer purchased.

The redemption information may also include supplemental offer information. For example, the voucher may let the buyer purchase three VCR tapes for \$1 if the buyer takes possession of a VCR at a particular retailer. According to one embodiment of the present invention, the supplemental offer may have a separate associated redemption code and be on a separate voucher.

According to one embodiment of the present invention, when the buyer presents a voucher to a retailer, the retailer device 400 sends information related to an attempt to take possession of the product (such as the redemption code included on the voucher) to the purchasing system device 300.

A retailer device 400 may comprise, for example, Point Of Sale (POS) devices, such as a POS controller 410 that communicates with POS terminals 450 and the purchasing system device 300 during the redemption process. A POS terminal 450 may include an optical bar code scanner (to read bar codes on products and/or vouchers), a card reader (to read cards, such as cards that have magnetizable strips on which data can be recorded) and a keypad (e.g., one used by an employee of the retailer to enter credit card numbers). One such card reader is the OMNI™ 1450 payment terminal, manufactured by VeriFone, Inc., which includes a built-in, magnetic-stripe reader, a Personal Identification

Number (PIN) entry pad (e.g., one used buy a buyer to enter a debit card PIN) and an integrated smart card reader. The retailer devices 400 also may comprise, for example, a CAT 451 coupled to the POS terminal, and inventory systems that periodically update the purchasing system device 300.

5 The purchasing system device 300 and retailer device may communicate in substantially real time during the redemption of a voucher. That is, the retailer device 400 may connect to the purchasing system device 300 when a buyer is attempting to take possession of the product. In another embodiment, the purchasing system device 300 and the retailer device 400 communicate on a periodic (e.g., every night at midnight) or non-
10 periodic (e.g., when a new redemption code is generated) basis. For example, the purchasing system device 300 can periodically communicate with each retailer device 400 regarding buyer redemption codes, redeemable at the retailer, that have been issued. Likewise, the retailer device 400 can in turn transmit to the purchasing system device 300 a list of the redemption codes that have been redeemed at the retailer during the day. In
15 some embodiments, the retailer is also the seller who accepts a buyer's offer. In such an embodiment, the retailer device 400 may perform the function of a potential seller device 500 or be in communication with another server that performs the function of a potential seller device 500.

20 When the retailer device 400 sends information related to an attempt to take possession of the product (such as a redemption code) to the purchasing system device 300, the information can be used to authorize the buyer to take possession of the product.

For example, the retailer device 400 may send an authorization request to the purchasing system through a credit card processing system device 100. The credit card processing system device 100 may be, for example, a server operated by an entity that
25 manages financial accounts and/or authorizes transactions, such as First Data Corp. The purchasing system device 300 can send a verification back to the retailer device 400 (e.g., through the credit card processing system device 100) authorizing the retailer to let the buyer take possession of the product. The purchasing system device 300 may also provide a payment to the retailer in exchange for providing the product to the buyer. In this case,
30 of course, the amount paid to the retailer may or may not be equal to the offer amount paid by the buyer. For example, suppose the purchasing system arranges for a buyer to purchase a television for \$300, and the buyer takes possession of the television at a retailer (one of several indicated on the voucher) that typically sells that television for \$320. In

this case, the purchasing system may pay the full retail price (i.e., \$320) to the retailer (e.g., the settlement price).

In addition to the communications discussed above, it will be appreciated that any two or more of the devices comprising the redemption system 10 may communicate if desired (as shown, by way of examples, by the dashed lines in FIG. 1A). For example, two retailer devices 400 may communicate with respect to inventory information or when a buyer takes possession of a product. Moreover, a retailer device 400 may communicate with a seller device 500 with respect to a subsidy amount, a substitute product or a supplemental offer. Similarly, two seller devices 500 may communicate with respect to substitute products or supplemental offers. Likewise, a seller device 500 or retailer device 400 may communicate with the credit card processing system device 100 with respect to a credit card account associated with the buyer. As a final example, a buyer device 200 may communicate with a retailer device 400 with respect to the redemption code (as explained herein) or for any other reason.

Note also that some or all of the actions associated with the purchasing system device 300 may be performed by a retailer, a product manufacturer, or a party other than the retailer and product manufacturer.

Purchasing System Vouchers

As previously noted, the purchasing system device 300 may output redemption information, including supplemental offer information and information that the buyer needs to take possession of the product at a retailer. The information can be transmitted to the buyer in the form of an electronic message (e.g., a block of code executable by the buyer device) enabling the creation (e.g., printing) of a voucher. As shown in FIG. 1B, which illustrates a purchasing system voucher 20 according to an embodiment of the present invention, information about the purchase can also be printed on the voucher.

For example, the information printed on the purchasing system voucher 20 can include: the name of the buyer 21; a description of the product (or products) being purchased 22; a field 23 listing an issue date, an offer identifier and a redemption code associated with the voucher 20; and an expiration date and/or penalty information 24. Note that a number of different products 22 may be listed on a voucher. This may be

necessary, for example, if multiple products are being purchased or if different retailers use different bar codes and model names for essentially the same product.

The buyer may have the option of going to a number of different retailers listed on the voucher 20 to take possession of the product. For example, the voucher 20 shown in FIG. 1B lists a number of different retailers 25a, 25b and associated retailer identifiers 26a, 26b. Note that the retailer identifiers 26a, 26b may also encode other information, such as, for example, redemption codes and product identifiers. Of course, when the seller is a retailer the voucher 20 may only be redeemable through that retailer (e.g., a specific retail store, a subset of retail stores in a national chain, or all retail stores in a national chain).

According to one embodiment of the present invention, the price being paid by the buyer is not included on the voucher 20. Thus, if the seller is not the retailer, the retailer that provides the product to the buyer will not be aware of the price the seller accepted, or the buyer established, for the product. Thus, in this embodiment of the present invention, the retailer is only aware of the settlement price paid by the purchasing system for honoring the voucher.

One or more bar codes on the voucher (e.g., bar codes in place of or in addition to the retailer identifier 26a, 26b) may also include the redemption code and a product identifier. In such an embodiment, a cashier at the POS terminal 450 can scan the voucher 20 along with the product and, if the product identifier encoded into the bar code matches the scanned product identifier, the transaction can be locally authorized. Alternatively, a bar code may serve as a pointer to a record in a database, either stored locally at the retailer or remotely at the purchasing system device 300. Using this bar code, the transaction may be authorized based on whether the data stored in a database matches the current transaction (i.e., the voucher is redeemable at that retailer for that product).

Instead of a printed voucher 20, the redemption information may instead simply be a number or alphanumeric identifier provided to the buyer. In this case, the buyer could write the information down (such as when receiving the information over the telephone) and bring the number to the retailer when taking possession of the product.

According to another embodiment of the present invention, redemption information may be, for example, information encoded using, for example, cryptographic techniques. Applicable encryption techniques are described in Bruce Schneier, "Applied Cryptography: Protocols, Algorithms, and Source Code in C" (John Wiley & Sons, Inc., 2nd Ed. 1996). The information may also be stored electronically, such as in a smart-card

type device, a PDA or a removable memory device. A single voucher 20 may be redeemable at a number of different retailers 25a, 25b - or separate vouchers can be printed for each retailer. In this case, when one voucher is redeemed the remaining vouchers can be made invalid.

5 According to another embodiment of the present invention, the voucher 20 also serves as a Record Of Charge (ROC). For example, the purchasing system may place a hold, or "freeze," on the buyer's credit card account when sending the redemption information to the buyer. As used herein, a freeze is any pre-authorization of a charge that will be made to the buyer's account at a later time. The buyer then prints out the
10 voucher/ROC and brings it to a retailer. The retailer may then forward the voucher/ROC to the credit card processing system device 100. That is, the frozen portion is only reserved until the buyer takes possession of the product at a retailer, at which point the purchasing system requests that funds be transferred from the buyer's account. Other "freezing" methods are practiced in the hotel industry (e.g., a price is authorized when the
15 buyer reserves a room, but funds are not transferred until the buyer checks out). Note that a hotel may authorize a price higher than the rate the buyer agreed to pay for the room to cover supplemental services such as telephone charges, in-room movies and in-room dining service.

 According to this embodiment of the present invention, the purchasing system uses
20 a merchant identifier associated with the purchasing system and receives payment for the transaction from the credit card processing system. The purchasing system then provides payment to the retailer for allowing the buyer to take possession of a product. According to another embodiment, the voucher/ROC may instead indicate the retailer's merchant identifier as the entity to which the funds should be transferred (e.g., directly).

25 The redemption system 10 devices will now be explained in greater detail with respect to FIGS. 2 to 5.

Buyer Device

30 FIG. 2 illustrates a buyer device 200 that is descriptive of the device shown in FIG. 1A according to an embodiment of the present invention. As will be appreciated, portions of the descriptions of the various elements described with respect to FIG. 2 will also be applicable to the other devices comprising the redemption system 10. The buyer device

200 comprises a processor 220, such as one or more Pentium® processors, coupled to: a communication port 240 configured to communicate through a communication network (not shown in FIG. 2); a clock 242; and an output device 244, such as a display or printer. The communication port 240 may be used to communicate with, for example, the purchasing system to access a Web site and submit an offer to purchase a product as instructed by the user of the buyer device.

The processor 220 is also in communication with Random Access Memory (RAM) and Read Only Memory (ROM) data storage devices 231, 232. The data storage devices 231, 232 may instead comprise any appropriate storage device, including combination of magnetic, optical or semiconductor memory.

The data storage devices 231, 232 store a program for controlling the processor 220. The processor 220 performs instructions of the program, and thereby operates in accordance with the present invention. For example, the processor 220 may execute a Web browser application program.

The program may be stored in a compressed, uncompiled and/or encrypted format. The program furthermore includes program elements that may be necessary, such as an operating system, a database management system and “device drivers” used by the processor 220 to interface with peripheral devices. Appropriate device drivers and other necessary program elements are known to those skilled in the art and are not described in detail herein.

As previously noted, the output device 244 may comprise a printer, and this printer may be used to a print a purchasing system voucher, such as a voucher including a redemption code. If the buyer device 200 is not attached to a printer, the buyer may write down the redemption code or store the code in the buyer device 200 or another device, such as a portable buyer device. For example, the buyer may write down a redemption code and input the code at the retailer device 400 (including a retailer kiosk). A retailer device 400 may communicate with the purchasing system device 300, such as through an Internet connection, and access a database record associated with the transaction based on the redemption code. The retailer device 400 could then print the voucher for the buyer, if desired.

According to another embodiment of the present invention, the buyer can take possession of the product without using a printed voucher. For example, the buyer may simply tell the POS terminal 450 operator the redemption code. The operator inputs the

redemption code using the POS terminal 450 and the process continues as if the buyer used a printed voucher. Also, if the buyer stores the redemption code in a portable buyer device (e.g., a PDA), the buyer may communicate the redemption code directly from the buyer device to the POS terminal 450, such as by using an Infra-Red (IR) communication link.

Purchasing System Device

FIG. 3 illustrates a purchasing system device 300 that is descriptive of the device shown in FIG. 1A according to an embodiment of the present invention. The purchasing system device 300 comprises a processor 320 coupled to: a communication port 340 configured to communicate through a communication network (not shown in FIG. 3); a clock 342; and RAM and ROM storage devices 331, 332. The communication port 340 may be used to communicate with, for example: (i) a plurality of seller devices 500; (ii) a plurality of buyer devices 200; (iii) a plurality of retailer devices 400; and or a plurality of credit card processing system devices 100. The sellers may comprise, for example, product manufacturers and/or retailers. The buyers may comprise individuals who “log onto” a Web site and submit offers to purchase products. Such a Web site could be, for example: (i) hosted by the purchasing system device 300 or (ii) hosted by a server coupled to the purchasing system device 300.

The processor 320 is also in communication with a data storage device 330. The data storage device 330 comprises an appropriate combination of magnetic, optical and/or semiconductor memory, and may include Random Access Memory (RAM), Read-Only Memory (ROM) and/or a hard disk drive. The processor 320 and the storage device 330 may each be: (i) located entirely within a single computer or other computing device; (ii) connected to each other by a remote communication medium, such as a serial port cable, telephone line or wireless frequency transceiver; or (iii) a combination thereof. In one embodiment, the purchasing system device 300 may comprise one or more computers that are connected to a remote database server.

The data storage device 330 stores a program 325 for controlling the processor 320. The processor 320 performs instructions of the program 325, and thereby operates in accordance with the present invention. For example, when a buyer offer is received, the purchasing system device 300 may arrange for the buyer to purchase a product and take

possession of the product at a retailer. Note that, as used herein, information may be “received” by, for example: (1) the purchasing system device 300 from a buyer device 200; or (2) a software application or module within the purchasing system device 300 from another software application, module or any other source.

5 As shown in FIG. 3, the storage device 330 also stores: an accepted offer database 600 (described in detail with respect to FIG. 6); a seller database 700 (described in detail with respect to FIG. 7); a retailer database 800 (described in detail with respect to FIG. 8); a supplemental product offer rules database 900 (described in detail with respect to FIG. 9); a supplemental product offer status database 1000 (described in detail with respect to
10 FIG. 10); and a redemption identifier database 1100 (described in detail with respect to FIG. 11). The schematic illustrations and accompanying descriptions of the databases presented herein are exemplary, and any number of other database arrangements could be employed besides those suggested by the figures.

As will now be described, the purchasing system device 300 shown in FIG. 3 lets a
15 buyer establish a price for a product using a communication network (e.g., through the Internet) with a seller (e.g., a product manufacturer or a retailer) before taking possession of, or “picking up,” the product at a convenient retailer. The purchasing system device 300 may issue the buyer a redemption code, such as a code included on a printed voucher, that is redeemable for the product at one or more “participating” local retailers. That is,
20 the purchasing system has agreements with these retailers such that the retailers agree to honor purchasing system vouchers (either generally or only for specific products).

According to an embodiment of the present invention, each participating retailer establishes a “settlement price” for products sold through the purchasing system. The settlement price is the amount that the purchasing system must provide to the retailer in
25 exchange for honoring a voucher. A retailer may set the settlement price below, at or above the product’s retail price. The retailer may, for example, set the settlement price below the retail price for a given product to increase the likelihood of the purchasing system accepting a buyer’s offer for the product and arranging for the buyer to take possession of the product at the retailer, thus generating additional traffic for the retailer
30 (i.e., the buyers who come to the store to redeem vouchers).

In another embodiment of the present invention, a product manufacturer (acting as a seller) can bypass a retailer’s pricing structure and establish a price for a product directly with a buyer without the burden of delivering the product to the buyer. Similarly, an

embodiment of the present invention lets a retailer (acting as a seller) establish a price for a product with a particular buyer without lowering the price for the product typically charged at a retail store. This can attract new buyers without giving a discounted price to other customers who visit the retail store.

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Retailer Devices

FIGS. 4 and 5 illustrate portions of the retailer device 400 according to one embodiment of the present invention. In particular, FIG. 4 is a block schematic diagram of the POS controller 410. The POS controller 410 includes a processor 420 coupled to: a communication port 440 (which may, for example, communicate with the POS terminal 450); a clock 442; and RAM and ROM storage devices 431, 432. The processor 420 is also coupled to a storage device 430 that stores a program containing instructions adapted to be executed by the processor 420 to perform at least one embodiment of the present invention.

As shown in FIG. 4, the storage device 430 also stores: a retailer redemption identifier database 1200 (described in detail with respect to FIG. 12); a pricing database 1300 (described in detail with respect to FIG. 13); and a transaction database 1400 (described in detail with respect to FIG. 14).

FIG. 5 is a block schematic diagram of the POS terminal 450. The POS terminal 450 includes a processor 470 coupled to: a communication port 490 (which may, for example, communicate with the POS controller 410 or the CAT 451); a clock 492; RAM and ROM storage devices 481, 482; an input device 496, such as a bar code reader or keypad; and an output device 494, such as a printer capable of printing a receipt. The storage device 430 stores a program 425 containing instructions adapted to be executed by the processor 420 to perform at least one embodiment of the present invention.

For example, the retailer device 400 (i.e., the POS controller 410, the POS terminal 450 or another device) may receive redemption information from a buyer. The retailer device 400 may also receive verification information (e.g., information enabling the retailer to authorize the buyer to take possession of the product) from the purchasing system device 300. The retailer then provides the product to the buyer and receives, from a party different than the buyer, a payment in exchange for providing the product to the buyer. That is, the retailer does not receive payment directly from the buyer and does not,

according to one embodiment of the present invention, receive payment of an amount based on the amount the buyer is providing for the right to take possession of the product at the retailer.

The POS controller 410 is in “communication” with (or is linked to) the purchasing system device 300 and one or more POS terminals 450. Those skilled in the art will understand that devices in communication with each other need not be continually transmitting to each other. On the contrary, such devices need only transmit to each other as necessary, and may actually refrain from exchanging data most of the time. For example, a device in communication with another device via the Internet may not transmit data to the other device for weeks at a time.

A retailer that participates in the purchasing system as both a seller and a product provider will need to determine, when a given product is being redeemed, whether or not the retailer is acting as the seller. This may be done using a database or by communicating with the purchasing system. For example, a retailer may both: (i) sell a particular television through a purchasing system; and (ii) let buyers that purchase the television through the purchasing system, from a different seller, take possession of the television at the store. In this case, when a buyer visits the retailer to redeem a voucher, it must be determined whether the retailer should receive from the purchasing system: (i) the buyer price (if the retailer, acting as a seller, sold the television to the buyer through the purchasing system); or (ii) the settlement price (if the retailer is merely letting the buyer take possession of the television at the retail store).

Examples of databases that may be used in connection with the redemption system will now be described in detail with respect to FIGS. 6 to 10.

Accepted Offer Database

Referring to FIGS. 6A and 6B, a table 600 represents one embodiment of the accepted offer database that may be stored at a purchasing system device 300 (FIGS. 1A and 3). The table 600 includes entries identifying buyer offers that have accepted through the purchasing system. The table 600 also defines fields 602, 604, 606, 608, 610, 612, 614, 616, 618, 620, 622, 624, 626, 628 for each of the entries. The fields specify: an offer identifier 602; a seller identifier 604; a purchasing system price 606; a product identifier 608; a payment protocol 610; a redemption identifier 612; a redemption status 614; an

expiration date 616; a penalty amount 618; an initial amount 620; a final amount 622; authorized retailers 624; an expected price range 626 and a redemption retailer 628.

The offer identifier 602 may be, for example, an alphanumeric code uniquely associated with a particular buyer or a particular purchasing system transaction. For example, the buyer's payment identifier (e.g. credit card number) may also function as the offer identifier 602. The seller identifier 604, the purchasing system price 606 and the product identifier 608 are generally associated with identifying the seller, price and product involved in the purchasing system transaction. The payment protocol 610, redemption identifier 612 (including a pseudo payment identifier as will be explained in detail), and redemption status 614 are associated with the buyer providing payment for the product and information associated with the buyer taking possession of the product at a retailer. In addition, the purchasing system may charge the buyer the penalty amount 618 if the buyer does take possession of the product by the expiration date 616.

The initial amount 620 may represent an amount of payment initially determined by the purchasing system device 300 (which may be, for example, charged or frozen), while the final amount 622 may represent the amount of payment actually required. The final amount 622 may be different from the initial amount if, for example, a different tax rate applied to the transaction when the buyer takes possession of the product. The authorized retailers 624 field lists retailer identifiers associated with one or more retailers at which the buyer may take possession of the product, and the expected price range 626 represents a range of prices (e.g., retail prices) associated with those retailers. In one embodiment, the retailer authorizes a redemption code by transmitting the redemption identifier, the retailer identifier, and the retailer price for the product the buyer is attempting to take possession of to the purchasing system through a banking network (e.g., using a CAT). If (i) the transmitted retail price is within the expected price range 626 stored in association with the received redemption identifier, (ii) the redemption status 614 is not "redeemed"; and (iii) the retailer identifier is listed in the authorized retailers field 624, the received redemption identifier is verified successfully. In cases where the product identifier of the product the buyer is attempting to take possession of is not transmitted to the verification process, the expected price range 626 may be used to verify that the product the buyer is attempting to take possession of is the same product the buyer purchased through the purchasing system. Of course, the purchasing system may need

access to the relevant retail prices at the participating retailers in order to set the expected price range 626 appropriately.

Finally, the redemption retailer 628 may contain the retailer identifier associated with the retailer at which the buyer actually takes possession of the product. Note that if the buyer has not yet taken possession of a product, the redemption retailer 628 may be set to, for example, "TBD."

Seller Database

Referring to FIG. 7, a table 700 represents one embodiment of the seller database that may be stored at a purchasing system device 300 (FIGS. 1A and 3). The table 700 includes entries identifying sellers that sell products through the purchasing system. The table 700 also defines fields 702, 704, 706 for each of the entries. The fields specify: a seller identifier 702; a seller communication address 704; and an account identifier 706.

The seller identifier 702 may be, for example, an alphanumeric code uniquely associated with a particular seller or a particular purchasing system transaction, and may or may not be based on the seller identifier 604 stored in the accepted offer database 600. The seller communication address 704 may be an IP address that is used by the purchasing system device 300 to communicate transaction-related data to the seller device 500. In an embodiment where buyer offers are transmitted to at least one seller, this address is used to communicate offers and acceptances. The account identifier 706 can be used to identify an account to receive funds when a transaction is completed (e.g. after the buyer takes possession of the product at a retailer).

In general, this database may be used, for example, to: (1) identify the seller during the registration processes of FIGS. 11 and 12; and (2) identify accounts for settlement purposes.

Retailer Database

Referring to FIG. 8, a table 800 represents one embodiment of the retailer database that may be stored at a purchasing system device 300 (FIGS. 1A and 3). The table 800 includes entries that identify retailers at which a buyer may take possession of products purchased through the purchasing system. The table 800 also defines fields 802, 804, 806

for each of the entries. The fields specify: a retailer identifier 802; a physical location 804; and a retailer communication address 806.

The retailer identifier 802 may be, for example, an alphanumeric code uniquely associated with a particular retailer or a particular purchasing system transaction. The physical location 804 may be used by the system to determine if a retailer address is geographically close enough to the buyer's address to be included on a voucher, using algorithms which are well known in the art.

The retailer communication address 806 may be an Internet Protocol (IP) address that is used by the purchasing system to query various retailers to determine, for example, which retailer currently has stock of a given product. Various systems configurations and communication protocols developed by Telxon Corporation of Akron, Ohio can also be used to locate retailer inventory. Accordingly, in one embodiment of this invention a retailer may be selected as a retailer at which a buyer may take possession of a product based on a determination that the retailer currently has the product in inventory.

Supplemental Product Offer Rules Database

Referring to FIG. 9, a table 900 represents one embodiment of the supplemental product offer rules database that may be stored at a purchasing system device 300 (FIGS. 1A and 3). The table 900 includes entries identifying supplemental offers that may be provided to a buyer that purchases a product through the purchasing system. The table 900 also defines fields 902, 904, 906, 908, 910, 912, 914 for each of the entries. The fields specify: an offering party identifier 902; a supplemental product identifier 904; a supplemental product offer identifier 906; a supplemental product discount 908; supplemental product offer rules 910; supplemental product offer content 912; and an offer expiration date 914.

As used herein, a "supplemental" offer includes an offer provided to a buyer by the purchasing service on behalf of a retailer or a manufacturer. A condition of the buyer's acceptance of the supplemental offer may be, for example, taking possession of the product purchased through the purchasing system. For example, a retailer may wish to provide supplemental product offers along with the redemption code. That is, information about the supplemental offer may be included on the purchasing system voucher. In an embodiment where the buyer is not bound to take possession a product from a particular

retailer, an offer may encourage the buyer to visit the offering retailer to take possession of the product. Moreover, supplemental offers may encourage a buyer to spend more at a retailer from which he or she take possession of the product. The offering party identifier 902 can identify, for example, a retailer or a seller. That is, either type of party can offer supplemental product offers to the buyer. The supplemental product offer content 912 is printed on the buyer's purchasing system voucher 20. Note that the voucher 20 may have a separate redemption code associated with each supplemental offer according to one embodiment of the present invention.

Supplemental Product Offer Status Database

Referring to FIG. 10, a table 1000 represents one embodiment of the supplemental offer status database that may be stored at a purchasing system device 300 (FIGS. 1A and 3). The table 1000 includes entries identifying supplemental offers that have been provided to buyers. The table 1000 also defines fields 1002, 1004, 1006 for each of the entries. The fields specify: a supplemental product offer identifier 1002; a redemption identifier 1004; and a status 1006. The supplemental product offer identifier 1002 may be, for example, a unique alphanumeric code associated with a supplemental offer or product.

For example, as shown in the first record of the supplemental offer status database 1000, the supplemental offer having a supplemental product offer identifier 1002 of "019" as a redemption identifier 1004 of "877175671" and a status 1006 of "redeemed."

Methods that may be used in connection with the redemption system according to an embodiment of the present invention will now be described in detail with respect to FIGS. 11A to 20B.

Redemption Identifier Database

Referring to FIG. 11, a table 1100 represents one embodiment of the redemption identifier database that may be stored at a purchasing system device 300 (FIGS. 1A and 3). The table 1100 includes entries identifying redemption identifiers that have been generated by the purchasing system device 300. The table 1100 also defines fields 1102, 1104, 1106, 1108 for each of the entries. The fields specify: a redemption identifier 1102; a retailer identifier 1104; an expected retailer amount 1106; and a status 1108.

The redemption identifier 1102 may be, for example, a unique alphanumeric code associated with a particular retailer (or a group of retailers) at which a particular buyer may take possession of a particular product purchased through the purchasing system.

According to one embodiment of the present invention, the redemption identifier 1102

may be, for example, a sixteen digit pseudo credit card account number (as shown in the second and third records in the table 1100). Note, however, that the redemption identifier 1102 may instead be any other type of identifier, as shown in the first record in the table 1100. The redemption identifier database 1100 may be used by the purchasing system device 300, for example, to track the status of outstanding redemption codes. For example, each redemption identifier 1102 may be associated with a one or more retailer identifiers 1104, each having an associated expected retailer amount 1106 (e.g., an appropriate settlement price or retail price) and the status 1108 of the redemption identifier (e.g., “pending,” “redeemed”).

Retailer Redemption Identifier Database

Referring to FIG. 12, a table 1200 represents one embodiment of the retailer redemption identifier database that may be stored at a POS controller 410 (FIGS. 1A and 4) or elsewhere in the retailer device 400. The table 1200 includes entries identifying redemption identifiers that may be redeemed at that particular retailer. The table 1200 also defines fields 1202, 1204, 1206, 1208 for each of the entries. The fields specify: a redemption identifier 1202; a status 1204; a product identifier 1206; and a dates valid range 1208. The retailer redemption identifier database 1200 may be used, for example, when the retailer device 400 locally (e.g., without sending a request to the purchasing system device 300) determines whether a buyer is authorized to take possession of a product according to one embodiment of the present invention. For example, the purchasing system device 300 may periodically send information to the retailer device 400 to update information in this table.

The redemption identifier 1202 may be, for example, a redemption code generated by the purchasing system device 300. Each redemption identifier 1202 may be associated with a status 1204 such as “pending” or “redeemed.” According to one embodiment of the present invention, if the buyer loses a purchasing system voucher, the status 1204 associated with the voucher may be set to “canceled” to prevent someone else from taking

possession of the buyer's product. In addition, the retailer redemption identifier database 1200 may use the product identifier 1206 and the dates valid range 1208 to make sure that a buyer is taking possession of an appropriate product at an appropriate point in time.

Pricing Database

Referring to FIG. 13, a table 1300 represents one embodiment of the pricing database that may be stored at a POS controller 410 (FIGS. 1A and 4) or elsewhere in the retailer device 400. The table 1300 includes entries identifying a product available at the retailer. The table 1300 also defines fields 1302, 1304, 1306 for each of the entries. The fields specify: a product identifier 1302; a retail price 1304; and a settlement price 1306.

The product identifier 1302 may be, for example, a unique alphanumeric code associated with a product available at the retailer. The pricing database 1300 stores the retail price 1304 (e.g., the price the retailer normally charges for the product associated with the product identifier 1302) and the settlement price 1306 (e.g., the price the retailer has agreed to accept in exchange for providing the product associated with the product identifier 1302 to the buyer). Using this information, the retailer may determine an appropriate amount to expect (e.g., the expected retail price 1304 for the product).

Transaction Database

Referring to FIG. 14, a table 1400 represents one embodiment of the transaction database that may be stored at a POS controller 410 (FIGS. 1A and 4) or elsewhere in the retailer device 400. The table 1400 includes entries identifying a transaction. The table 1400 also defines fields 1402, 1404, 1406, 1408, 1410 for each of the entries. The fields specify: a transaction identifier 1402; a time 1404; a product identifier 1406; a payment method 1408; and a payment status 1410. The transaction database 1400 may be used by the retailer device 400, for example, to record information about each transaction.

The transaction identifier 1402 may be, for example, a unique alphanumeric code associated with a specific transaction. The time 1404 may reflect the time and date that the transaction took place. The product identifier 1406 may reflect one or more products that were involved in the transaction and the payment method 1408 may reflect the method of payment that was used with respect to those products (e.g., "cash," or "redemption

identifier"). Finally, the payment status 1410 may indicate the status of the payment with respect to the transaction associated with the transaction identifier 1402.

Methods that may be used in connection with the redemption system according to an embodiment of the present invention will now be described in detail with respect to

FIGS. 11A to 20B.

Redemption System Methods

FIGS. 15A and 15B are flow charts illustrating a general registration method 1500 performed by the purchasing system device 300 according to an embodiment of the present invention. The flow charts in FIGS. 15A and 15B, as well as the other flow charts discussed herein, are not meant to imply a fixed order to the steps, and embodiments of the present invention can be practiced in any order that is practicable. At 1502, a request to purchase a product is received from a buyer. For example, the buyer may submit a request using any conventional user-interface, such as a Web page or IVR menu.

The buyer and purchasing system establish or determine a price at which the buyer will purchase the product at 1504. In the buyer-offer embodiment, this may be achieved by identifying at least one seller who accepts a buyer-defined price. In a seller-driven pricing embodiment, this may be achieved by receiving an indication that the buyer finds a seller-defined product price acceptable and wishes to purchase the product. At 1506, the purchasing system identifies at least one retailer at which the buyer can take possession of the product. In one embodiment, the seller is the retailer and this may be automatically accomplished (e.g., when the retailer at which the buyer can take possession of the product is the seller). In an embodiment where the seller is not the retailer (e.g., a product manufacturer is the seller), this may be achieved by querying a database to identify, for example: (i) a retailer who currently has stock of the requested product; (ii) a retailer within a particular (perhaps buyer-specified) geographical area (e.g., 10 miles from the buyer's home address); and (iii) a retailer that typically carries the product.

A payment protocol is determined at 1508, and if the payment protocol requires at 1510 that the buyer's account be frozen for at least the purchasing system price, a payment identifier is received and the buyer's account is frozen at 1512. The act of freezing can be achieved, for example, by: (i) sending a request to the bank identified by the buyer's payment identifier to retain funds for at least the purchasing system price until the buyer

take possession of the product; or (ii) processing a charge to the buyer's account using a conventional CAT protocol but not depositing the ROC until the buyer redeems the product. An amount greater than the purchasing system price may be frozen to create a "cushion" to cover unforeseen transaction scenarios at the retailer, such as when a penalty is applied to the transaction because the buyer takes possession of the product after a predetermined period of time.

If the payment protocol requires at 1514 that the buyer provides payment for the product at the time the buyer's offer is accepted, the buyer's payment identifier is received and the purchasing system immediately processes the payment at 1516. For example, the purchasing system device 300 may seek an authorization from a remote credit card processing system 100. In this case, the purchasing system device 300 would receive the buyer's credit card and process payment for the determined price in a conventional manner. According to another embodiment, the purchasing system device 300 receives a digital cash bit stream and process it according to the required protocol. For a detailed explanation of various digital cash protocols, see Donald O'Mahony, "Electronic Payment Systems" (Artech House Publishers, 1997).

At 1518, a redemption identifier may be generated, received from the buyer or retrieved from a database. For example, a sixteen digit numerical code may generated where the first four digits are recognized by a credit card association to identify the purchasing system, as discussed above. A redemption code could also be generated by the applying a hash formula to data elements identifying the transaction, or the buyer may simply supply a buyer-defined password. The buyer-defined password may be a PIN that is additional to the redemption identifier.

At 1520, the redemption identifier and product description are stored in the purchasing system accepted offer database 600. This data can subsequently be retrieved to authorize the buyer to take possession of the product.

Supplemental product offer rules are evaluated at 1522, as described in detail with respect to FIGS. 13 and 17, and the redemption identifier and any supplemental product offer information are transmitted to the buyer at 1524 before the process ends.

FIGS. 16A and 16B are flow charts illustrating a registration method 1600 performed by the purchasing system device 300 according to another embodiment of the present invention. A buyer offer (including, for example, a payment identifier, a description of a desired product, and a buyer-defined price) is received from a buyer at

1602. The received buyer offer is processed at 1604. This may be achieved, for example, by transmitting the buyer offer to a plurality of potential sellers to see if any seller will accept the buyer offer. In another embodiment, this is achieved by querying a locally-stored database of seller rules or data to determine if a seller would accept the buyer's offer. If no seller can be found at 1606, the process ends. At this point, according to one embodiment of the present invention, the purchasing system may attempt to offer the buyer a third party subsidy or a package of products.

If a seller is found at 1606, payment for at least the established price is processed at 1608 using the payment identifier. According to one embodiment of the present invention, an amount at least equal to the purchasing system price is frozen at this point in a manner similar to the one discussed with respect to FIG. 15. According other embodiments, the payment is processed by immediately seeking an authorization from a remote credit card processing system or by adhering to a digital cash transfer protocol.

At 1610, a redemption identifier may be generated, received from the buyer, or retrieved from a database. At 1612, the redemption identifier and product description are stored in the accepted offer database 600. Supplemental product offer rules are evaluated at 1614, as described in detail with respect to FIGS. 13 and 17, and the redemption identifier and any supplemental product offer information are transmitted to the buyer at 1616 before the process ends.

FIG. 17 is a flow chart illustrating a supplemental offer rules evaluation method 1700 performed by the purchasing system device 300 to determine if a supplemental product offer should be given to a buyer along with the redemption code according to an embodiment of the present invention. Initially, it is determined at 1702 whether or not information related to the purchasing system transaction meets supplemental product offer rules (as stored, for example, in the supplemental product offer rules database 900). For example, the system may determine if the product being purchased qualifies for any supplemental product offers. If no supplemental product offers are found, the registration process continues at 1704 (e.g., at 1524 of FIG. 15 or 1616 of FIG. 16).

If one or more supplemental product offers are found at 1702, supplemental offers that have not expired are identified at 1706 by comparing the system date to the corresponding supplemental offer expiration dates 914 in the supplemental product offer rules database 900. At 1708, the offer information is retrieved for the non-expired, qualifying supplemental offers and the registration process continues. Note that instead of

performing step 1706, expired supplemental offers may simply be deleted from the appropriate databases (e.g., will not be found in the first place).

FIGS. 18A to 18D are flow charts illustrating a point of sale redemption method 1800 performed by the POS controller 410 according to an embodiment of the present invention. Note that some or all of this process may instead be performed by the POS terminal 450. This process may also be executed before, during or after other products have been scanned at the POS terminal 450. That is, the buyer may be allowed to purchase additional products (not purchased through the purchasing system) from the retailer in the same transaction. At 1802, redemption code and product identifier information are received through an input device. In one embodiment, the redemption code merely signals to the retailer that the retail price should not be charged yet. However, if the product identifier is received before the redemption code, the system may initially add the retail price to the running subtotal of the transaction. If this is the case, the system may later remove the retail price from the running subtotal and await authorization and/or validation of the redemption code. According to another embodiment of the present invention, the difference between retail price and the established price may be credited to the running subtotal.

At 1404, the redemption code is validated. Methods to validate the redemption code are described in detail with respect to FIGS. 20, 22 and 23. At 1806, the POS controller 410 over-rides the retail price of the product such that a price of \$0.00 is queued for the product in the running subtotal. In other words, the retail price may be replaced with the price "\$0.00" when the redemption code is validated, and "\$0.00" may be printed on the receipt at the end of the transaction routine. If the redemption code is not validated, the POS controller 410 may process the transaction normally such that the retail price (e.g., a price retrieved from the pricing database 1300) is added to the running subtotal.

At 1808, the price of the product is adjusted to determine if the buyer should pay more or less than the purchasing system price to account for unforeseen transaction scenarios as described herein (e.g., a penalty, a tax, a coupon). FIG. 19 describes a price adjustment method according to one embodiment of the present invention. The price adjustment may be performed in a manner such that the purchasing system price is not disclosed to the retailer. Accordingly, the price adjustment may be performed by the purchasing system device 300. In this case an "initiation" step can be performed by the POS controller 410, such as by sending a signal to the purchasing system device 300 to

perform the price adjustment. According to another embodiment of the present invention, the POS controller 410 would transmit transaction conditions (e.g., date of redemption and retail price associate with a product) to the purchasing system device 300, and the purchasing system device 300 would determine whether any price adjustment is appropriate.

The purchasing system device 300 may charge or credit any unforeseen amount to the buyer's payment identifier, or instruct the POS controller 410 to charge or credit the buyer. The price adjustment may instead be performed by the POS controller 410.

The POS controller 410 then determines a payment protocol at 1810 (e.g., frozen, prepaid or pay-at-redemption), such as by using the payment protocol field 610 of the accepted offer database 600. For example, a signal may be received from the purchasing system device 300 indicating the payment protocol, or instructions may be read from an encrypted or bar-coded redemption voucher.

If the payment protocol is such that the buyer's account had previously been frozen at 1812, it is determined at 1814 whether a signal has been received from the purchasing system device 300 directing the POS terminal 450 to adjust the product price or final charge. Note that all price adjustments may be handled by the purchasing system device 300 such that the purchasing system device 300 either credits or debits the initially provided payment identifier as appropriate. However, if the price adjustment is not handled by the purchasing system device 300, the purchasing system device 300 may instruct the POS controller 410 to charge or credit the buyer. Because the buyer's account may be "frozen" for an amount greater than the purchasing system price, the price adjustment may not need an additional authorization from the credit card processing system device 100. Thus, the POS controller 410 may be directed to charge an additional amount if unforeseen transaction scenarios are such that both: (i) the final charge amount (e.g., after the method of FIG. 15 is performed) is greater than the frozen amount; and (ii) the purchasing system device 300 has instructed the POS terminal 450 to charge the difference to the customer.

If a signal directing the POS controller 410 to adjust the price or final charge has not been received at 1814, the process continues at 1822. If a signal directing the POS controller 410 to adjust the price has been received at 1814, the price adjustment details are determined. If the adjusted price is such that the buyer owes money at 1816, the adjusted amount is added to the running subtotal at 1418. Thus, at the end of the

transaction, the buyer can be charged the additional amount in addition to the prices of any other products that were purchased.

If the adjusted price is such that the buyer is due money at 1816, the adjusted amount is subtracted from the running subtotal at 1820. Thus, at the end of the transaction the buyer can use the credit as payment for any additional purchases. If, after adding any credit due to the subtotal, a credit is still due to the customer, the POS controller 410 can facilitate the rebate of the adjusted amount by either: (i) authorizing an instant cash rebate (e.g., using currency from a cash register drawer); (ii) issuing a store-credit voucher; or (iii) processing a "charge-back" to the customer's credit card.

Funds that were reserved by the purchasing system when the customer arranged to purchase the product are unfrozen at 1822. This may be achieved by transmitting a signal (possibly including the redemption code) to the purchasing system device 300 indicating that the product has been redeemed. At this point, the purchasing system 300 may unfreeze the funds by depositing a bank draft. The purchasing system 300 may also unfreeze the funds by signaling the credit card processing system device 100 or the buyer's bank that the funds should be relinquished. Or, in the embodiment where the redemption voucher acts as a ROC, the retailer 410 forward the voucher directly to the credit card processing system, which authorizes the debiting of the previously "frozen" funds and credits the retailer's account with their "merchant bank." Note that this step of unfreezing the funds may be eliminated in embodiments where the buyer pays the entire amount to the retailer when taking possession of the product.

If the payment protocol at 1812 and 1824 indicates that the buyer is to pay at redemption, the purchasing system price is added to the running subtotal at 1826. The purchasing system price can be obtained by the POS controller 410 by, for example: (i) querying the purchasing system 300; or (ii) reading the price from a redemption voucher (e.g., from a bar code on the redemption voucher).

If the payment protocol indicates that the buyer has either prepaid or is to pay at redemption, it is determined at 1828 if a signal has been received from the purchasing system device 300 directing the POS controller 410 to adjust the price or final charge. The price adjustment may be performed, for example, by the POS controller 410 or by the purchasing system device 300. When performed by the purchasing system device 300, the purchasing system device 300 may communicate a signal to the POS controller 410 to

adjust the final charge such that the buyer provides to the retailer either more or less than the purchasing system price.

If a signal directing the POS controller 410 to adjust the final charge has not been received at 1828, the process continues at 1436. If a signal directing the POS controller 410 to adjust the final charge has been received at 1428, the price adjustment details are determined. As before, the adjusted amount may be added to or subtracted from the running subtotal at 1830, 1832, 1834.

At 1836, any supplemental product offer redemption is processed (e.g., as described with respect to FIG. 24) before the conventional transaction processing (e.g., totaling the purchase amounts and adding taxes) is resumed at 1838.

Note that the amount authorized may be different than the amount that is actually charged to the buyer's financial account. This might be the case to account for unforeseen transaction scenarios that arise when the buyer takes possession of the product at a retailer, such as, for example: (i) a penalty imposed on the buyer for failing to take possession of the product within a predetermined time; (ii) the buyer taking possession of the product in a state or city having a higher or lower sales tax; or (iii) the retail price for the product being lower than the buyer price established through the purchasing system. That is, the amount finally paid by the buyer may be different than the purchasing system price agreed upon between the buyer and the seller through the purchasing system. For example, an additional discount (e.g., coupon) may be presented at the point of redemption, necessitating an adjusted price. Thus, a price adjustment may yield a final charge to the customer that is more or less than the purchasing system price.

Consider, for example, a purchasing system transaction involving an accepted offer price of \$200. The purchasing system device 300 initially assumed an additional charge of \$16, based on the 8% sales tax in the buyer's home state. The buyer, however, took possession of the product in a different state and the actual sales tax was only 6.5% (or \$13). The final price charged to the buyer's financial account, therefore, is only \$213.

In particular, FIGS. 19A to 19C are flow charts illustrating a price adjustment method 1500 performed by, for example, the purchasing system device 300 or the POS controller 410 according to an embodiment of the present invention. Note that because the amount frozen may be more than the purchasing system price (to reserve a "cushion" for unanticipated transaction scenarios), the result of this process may be that the buyer is not charged an amount above the amount originally frozen.

If it is determined that an additional coupon has been received for the product at 1902, the value of the additional coupon is determined at 1904. This may be accomplished by conventional processes, such as by using software developed by Catalina Marketing Corporation. The purchasing system price is determined at 1906. If performed by the purchasing system device 300, a simple query to the purchasing system price database 600 (FIG. 6), using the redemption identifier as a search item, may retrieve the purchasing system price. If the POS controller 410 performs this process, the purchasing system price may be determined by transmitting a request for the purchasing system price to the purchasing system device 300. The coupon value is applied to the purchasing system price at 1908, and the difference due to the buyer is determined and stored at 1910, 1912.

At 1914, it is determined if the retailer is located in an unanticipated tax jurisdiction. One way this step can be accomplished is by using the redemption code to identify the buyer in a buyer database. The zip code of the buyer stored in the buyer database may then be compared to the zip code of the retailer (e.g., the physical location field 804 of the retailer database 800). If the zip codes are such that the buyer lives in a different state than the retailer, the tax rate of the retailer's state is used. This may also be accomplished by adding a "tax rate" field to the retailer database 800 including area-specific tax rates. If the retailer's tax jurisdiction is unanticipated, the difference between the purchasing system price without the correct tax amount applied and the purchasing system price with the correct tax amount applied is determined at 1916 and stored at 1918.

At 1920, it is determined if a penalty will be imposed on the transaction. This may be accomplished by comparing the system date to an expiration date (e.g., a date stored remotely at the purchasing system device 300 in the accepted offer database 600 or included on the redemption voucher). If a penalty will be imposed, the penalty amount is identified at 1922 and stored at 1924. Here too, the penalty amount may included in the accepted offer database 600 or included on a redemption voucher.

The final charge amount is calculated at 1926. This amount may be calculated by taking the purchasing system price and adding any penalty or extra tax amount that may apply and subtracting any applicable coupon value.

If buyer's account was previously frozen as determined at 1928, it is determined if the final charge amount is greater than the frozen amount at 1930. As the frozen amount may be more than the purchasing system price, the final charge amount may still not be

greater than the frozen amount. If final charge amount is less than or equal to the frozen amount, no additional money is due from the customer.

If the final charge amount is greater than the frozen amount, payment for the difference is processed at 1932. For example, the purchasing system device 300 may charge the buyer's financial account for the difference. Alternatively, the purchasing system device 300 may instruct the POS controller 410 to charge the buyer for the additional amount, in which case the POS controller 410 continues processing at 1814.

If the buyer has prepaid for the product at 1934, it is determined if the final charge amount is greater than the prepayment amount at 1936. As before, if the final charge amount is greater than the prepayment amount, payment for the difference is processed at 1938. That is, the purchasing system device 300 may charge the buyer's financial account for the difference. Alternatively, the purchasing system device 300 may instruct the POS controller 410 to charge the buyer for the additional amount.

Finally, if the buyer is to pay at redemption at 1934, it is determined if the final charge amount is greater than the purchasing system price at 1940. If so, the difference is transmitted to the POS controller 410.

FIG. 20 is a flow chart illustrating a redemption validation method 2000 performed by the POS controller 410 according to an embodiment of the present invention.

According to this embodiment of the present invention, redemption codes are verified through a "back channel" communication to the purchasing system device 300.

At 2002, the received redemption code is transmitted to the purchasing system device 300 along with a product identifier. At this point, the purchasing system device 300 may perform the method described with respect to FIG. 21. At 2004, an authorization or decline signal is received from the purchasing system device 300.

If a decline signal is received at 2006, the signal is output to a retailer employee or the buyer at 2010 (e.g., using a printed message or visual display). In this case, the retail price for the product is retrieved at 2012 and added to the subtotal at 1614 before the transaction is processed conventionally at 2016. If an authorization signal is received from the purchasing system device 300, the method as described starting with 1806 is performed.

FIG. 21 is a flow chart illustrating a redemption validation method 2100 performed by the purchasing system device 300 according to an embodiment of the present invention. According to this embodiment of the present invention, redemption codes are received

through a “back channel” communication from the POS controller 410. At 2102, a redemption code and product identifier are received from the POS controller 410. It is determined, at 2104, if the redemption code exists in the accepted offer database 600. If not, at 1708 a decline signal is transmitted to the POS controller 410. If so, the status corresponding to the redemption code in the accepted offer database 600 is evaluated at 2106 to determine if the buyer has already taken possession of the product (e.g., at another retailer). If so, at 2108 a decline signal is transmitted to the POS controller 410.

It is also determined, at 2110, if the product identifier matches the product identifier in the accepted offer database 600. If not, a decline signal is transmitted to the POS controller 410 at 2108. Otherwise, the status in the accepted offer database 600 is updated to “redeemed” at 2112, and an authorization signal is transmitted to the POS controller 410.

FIG. 22 is a flow chart illustrating another redemption validation method 2200 performed by the POS controller 410. According to this embodiment of the present invention, a “local” pricing database 1300 (e.g., stored at the retailer and not at the purchasing system) is queried to determine whether a redemption code is valid. Such a local database may contain essentially the same data as the accepted offer database 600 stored at the purchasing system device 300. As such, the operator of the POS controller 410 (e.g., the retailer) may periodically update the purchasing system device 300 (e.g., with a batch process) to let the purchasing system device 300 track the redemption of vouchers.

As before, at 2202, 2204, 2206 it is determined if: (i) the redemption code exists; (ii) the redemption status is not “redeemed”; and (iii) the product identifiers match. If any of these conditions are not met, a decline signal is output at 2212. In this case, the retail price for the product is retrieved at 2214 and added to the subtotal at 2216 before the transaction is processed conventionally at 2218.

If all of the above three conditions are met, the status in the local database is updated to “redeemed” at 2208, and the steps described beginning with 1806 are performed.

FIG. 23 is a flow chart illustrating another redemption validation method 2300 performed by the POS controller 410. According to this embodiment of the present invention, a hash code is recreated and matched to the received redemption code. Here too, the operator of the POS controller 410 (e.g., the retailer) may periodically update the

purchasing system device 300 (using a batch process) to let the purchasing system track the redemption of vouchers. At 2302, transaction data and a redemption code are received. Note that the transaction data may include the buyer's credit card number, the retailer identifier, or other data elements that are used in the attempt verify the redemption code.

5 A hash formula is retrieved from data storage device at 2304 and applied to the transaction data at 2306. Note that the hash function may be considered "verification information," sent from the purchasing system device 300 to the retailer device 400, that enables the retailer to authorize a buyer (or a number of buyers) to take possession of products purchased through the purchasing system.

10 The resulting hash code is compared to the received redemption code at 2308. If there is not a match at 2310, a decline signal is output at 2316. In this case, the retail price for the product is retrieved at 2318 and added to the subtotal at 2320 before the transaction is processed conventionally at 2322. If the hash codes match at 2312, the redemption code may optionally be stored in memory at 2312 and the steps described beginning with 1806
15 are performed.

FIGS. 24A and 24B are flow charts illustrating a supplemental offer validation method 2400 performed by the POS controller 410 according to another embodiment of the present invention. Initially, it is determined at 2402, 2404, 2406 whether: (i) a supplemental product offer identifier has been input; (ii) a supplemental product identifier
20 has been included in a running subtotal; and (iii) the supplemental product offer is valid. For example, the supplemental product offer rules database 900 and supplemental product offer status database 1000 may be used to determine if a supplemental product offer exists, if the supplemental product offer has been not redeemed, what the supplemental product is, and if the supplemental product offer has not expired. The POS controller 410 may
25 instead store this data locally, if desired.

If any of these conditions are not met at 2406, the steps described beginning with 1828 are performed. On the other hand, if all of these conditions are met the redemption identifier corresponding to the supplemental product offer is identified at 2410. Again, this may be done using the supplemental product offer status database 1000.

30 At 2412, it is determined if that redemption identifier exists in the running subtotal (to make sure that the buyer took possession of, or is taking possession of, the product before taking advantage of the supplemental product offer). If not, the process described beginning with step 1838 is performed. If so, the supplemental product offer discount is

determined (e.g., using the supplemental product offer rules database 900) at 2414 and applied to the supplemental product price (as identified through conventional POS protocols) at 2416 before the process described beginning with step 1838 is performed. Note that the discount can be applied using coupon/discount redemption software. Note also that the buyer may be allowed to take advantage of the supplemental offer on a different day, or from a different retailer.

FIG. 25 is a flow chart illustrating a redemption validation method 2500 that may be performed by the retailer device 400 according to another embodiment of the present invention. At 2502 a redemption identifier is received when a buyer attempts to take possession of a product at the retailer. The retailer device 400 transmits the redemption identifier, along with a retailer identifier identifying the retailer and the price of the product to the purchasing system device 300 at 2504. If the redemption identifier is not successfully verified at 2506, the retailer does not authorize the operator to allow the buyer to take possession of the product at 2508.

If the redemption identifier is successfully verified at 2506, an indication of redemption is stored at 2510 and the collection of the settlement price from the purchasing system is queued at 2512. The retailer then authorizes the operator to allow the buyer to take possession of the product at 2514.

FIG. 26 is a flow chart illustrating the collection and disbursement of payment 2600 with respect to a buyer that may be performed by the retailer device 400 according to another embodiment of the present invention. At 2602 and 2604 a product identifier and a redemption identifier are received when a buyer attempts to take possession of a product at the retailer. The redemption identifier is verified at 2606 and the retailer "settles" with the buyer at 2608. That is, the retailer may provide a payment to the buyer if appropriate or may instead receive a payment from the buyer. For example, if the buyer needs to provide a penalty payment because the buyer is taking possession of the product more than a predetermined time after arranging to purchase the product through the purchasing system, the buyer may be required to provide a payment to the retailer (e.g., using either cash, a credit card or any other method of payment) or to the purchasing system (according to another embodiment of the present invention). An indication of the settlement is stored and transmitted to the purchasing system device 300 at 2610. At this point, the buyer is authorized to take possession of the product at 2612.

FIGS. 27A and 27B are flow charts illustrating a method of processing a purchasing system transaction 2700 that may be performed by the retailer device 400 according to another embodiment of the present invention. At 2702 and 2704 a product identifier and a redemption identifier are received when a buyer attempts to take possession of a product at the retailer. If the product identifier is not associated with a settlement price 2706 (e.g., the retailer has not previously arranged with the purchasing system to accept vouchers for this product) an “unable to authorize message” is output at 2708. If the product identifier is associated with a settlement price 2706, the redemption identifier is verified at 2710. If the redemption identifier is not successfully verified at 2712, an “unable to authorize message” is output at 2708. If the redemption identifier is successfully verified at 2712, the operator is instructed to accept the redemption identifier as payment for the product at 2714 and the retailer device 400 over-rides the retrieval of the retailer price associated with the product identifier at 2716.

The transaction is completed at 2718 and, if the seller is the retailer at 2720, the collection of the buyer price from the purchasing system queued at 2722. If, on the other hand, if the seller is not the retailer at 2720, the collection of the settlement price from the purchasing system queued at 2724.

FIGS. 28A and 28B are flow charts illustrating a method of processing a purchasing system transaction 2800 that may be performed by the retailer device 400 according to another embodiment of the present invention. At 2802 at least one product identifier is received at 2802 (e.g., the buyer may be both taking possession of product purchased through the purchasing system and purchasing another product directly from the retailer in the same transaction). At 2804, the retailer device 400 retrieves the retailer price for the products associated with the received identifiers at 2804. A redemption identifier is then received and verified at 2806 and 2808, respectively.

The product identifier associated with the redemption identifier is determined at 2810 and retail price of the product associated with the redemption identifier is removed from the running subtotal at 2812. With respect to that product, the settlement price is retrieved at 2814 and the retailer device queues the settlement price for collection from the purchasing system at 2816.

At 2818 the transaction total is determined based on the remaining retail prices in the transactions (i.e., the products that were not purchased through the purchasing system)

and payment of the transaction total is collected from the buyer at 2820. The operator may then be instructed to authorize the buyer to take possession of all of the products at 2822.

FIGS. 29A and 29B are flow charts illustrating a method of adjusting a price paid by a buyer 2900 that may be performed by the purchasing system device 300 according to another embodiment of the present invention. A redemption indication associated with a buyer attempting to take possession of a product through the purchasing system is received at 2902, including a redemption identifier, a retailer identifier, a retail price and a date of redemption. At 2904 a record is retrieved from the accepted offer database 600 based on the redemption identifier. Based on the retrieved record, an initial amount 620 associated with the product is determined at 2906.

The purchasing system device 300 then determines the retailer location at which the redemption occurred at 2908 and, based on the location of the retailer, decides if the tax amount applied when the buyer arranged to purchase the product is appropriate. If the tax amount was not appropriate, the initial amount 620 is adjusted to account for the tax differential at 2912.

The purchasing system device 300 then decides if the retail price was more than the established price at 2914. If the retail price was not more than the established price at 2914, the initial amount 620 is adjusted to account for the difference at 2916 (e.g., by using a lower retail price rather than the established price). If any other adjustments are necessary at 2918 (e.g., a coupon or penalty), the initial amount 620 is again adjusted as necessary at 2920.

At 2922, the final amount 622 is calculated and stored in the accepted offer database 600 based on the adjusted initial amount and the transaction is finalized with the buyer at 2924.

FIGS. 30A and 30B are flow charts illustrating a method of processing a purchasing system transaction 3000 that may be performed by the purchasing system device 300 according to still another embodiment of the present invention. At 3002, a redemption identifier, retailer identifier and product price are received in connection with a buyer's attempt to take possession of a product at a retailer. Based on the redemption identifier, the appropriate record is retrieved from the accepted offer database 600 at 3004.

If (i) the received retailer identifier is not found in the accepted offer database 600 at 3006 (e.g., is not listed in the authorized retailers field 624); (ii) the accepted offer database 600 indicates that the buyer has already taken possession of the product at

3010(e.g., when the redemption status 614 indicates “redeemed”); or the received product is not in the expected price range at 3012 (e.g., not within the expected price range 626) then the purchasing system device 300 transmits an “authorization denied” message to the retailer at 3008. That is, the buyer will not be allowed to take possession of the product.

5 Otherwise, if the current date not within the valid date range at 3014 (e.g., the current date is later than the expiration date 616), a penalty may be assessed to the buyer as appropriate at 3016 and 3018.

 An authorization of payment identifier is transmitted at 3020 and the redemption status 614 associated with the redemption identifier is set to “redeemed” in the accepted
10 offer database 600 at 3022. Finally, the purchasing system device 300 queues payment of the settlement price to the retailer based on the received retailer identifier at 3024.

 FIGS. 31A and 31B are flow charts illustrating a method of processing a purchasing system transaction 3100 that may be performed by the retailer device 400 according to yet another embodiment of the present invention. At 3102 and 3104, a
15 product identifier and redemption identifier are received in connection with a buyer’s attempt to take possession of a product at a retailer. A retailer redemption identifier database 1200, locally stored at the retailer device 400, is then queried at 3106. If no record is found having a redemption identifier 1202 corresponding to the received redemption identifier at 1308, an “authorization denied” message is output at 3110.

20 When a record is found having a redemption identifier 1202 corresponding to the received redemption identifier at 1308, it is determined if the status 1204 of that record is “redeemed” at 3112. If the status is “redeemed” (e.g., the buyer has already taken possession of the product), an “authorization denied” message is output at 3110. Similarly, if at 3114 the received product identifier does not correspond to the product
25 identifier 1206 stored in the retailer redemption identifier database 1200 (e.g., the buyer is attempting to take possession of a product different than the product he or she arranged to purchase through the purchasing system), an “authorization denied” message is output at 3110.

 At 3116, if the current date is not within the dates valid range 1208 the retailer
30 device 400 determines if the buyer is authorized to take possession of the product (e.g., even though the purchasing system voucher has expired) at 3118. If the buyer is not authorized, an “authorization denied” message is output at 3110. If the buyer is authorized

at 3118, an indication of late redemption is stored and transmitted to the purchasing system at 3120 (e.g., so that an appropriate penalty may be applied).

At 3122, the status 1204 associated with the received redemption identifier is set to “redeemed” (e.g., to prevent the buyer from taking possession of the product again) and the transaction is authorized at 3124. An indication of redemption is transmitted to the purchasing system at 3126, and the retailer device 400 queues collection of the settlement price in exchange for providing the product to the buyer.

Pseudo Payment Identifier as Redemption Code

As previously mentioned, according to one embodiment of the present invention the purchasing system device 300 uses pseudo payment identifiers as redemption codes. Note that a retailer may want to determine the validity of a purchasing system voucher to prevent fraudulent use, such as over-redemption of a voucher, by unscrupulous buyers. For example, consider a buyer who establishes a \$200 price with a manufacturer for a television. A hold is put on the buyer’s credit card for \$200, and a voucher for the television is issued to the buyer. The buyer prints out three copies of the voucher and redeems all three at various retailers, and each of the retailer settles with the purchasing system device 300 off-line or through a back channel at the end of the day. The purchasing system device 300 determines that it now owes the retailers an additional \$400 (for the two additional, unauthorized transactions). However, the purchasing system device 300 may find that the additional \$400 charge cannot be authorized because the buyer is over his or her credit limit. As will now be explained, an advantage of these embodiments of the present invention is that a retailer can verify a voucher at the POS when a customer is attempting to take possession of a product using a voucher (including a pseudo credit card account number) without special equipment.

According to this embodiment of the present invention, the retailer communicates with the purchasing system 300 at the time of redemption over the existing banking network using a CAT that is typically connected to each POS terminal 450 at the retailer. Of course, the retailer may instead communicate directly with the purchasing system at the time of redemption through other networks, such as the Internet.

According to this embodiment of the present invention, the purchasing system device 300 acts as a “pseudo” credit card account number issuer. That is, the redemption

code may look like a sixteen digit credit card number (e.g., 1111-2222-3333-4444) to the POS terminal 450. As is known, a CAT typically sends a credit card number to a credit card processing system device 100 for authorization, which in turn uses the first four digits of the credit card number to route the authorization request.

5 In this embodiment, the purchasing system may be assigned a unique four digit identifier (e.g., to be used as the first four digits of the pseudo credit card account number redemption code) that can be recognized by the credit card processing system device 100. The buyer uses the issued pseudo credit card account number when taking possession of a product at a retailer. For example, the pseudo credit card account number may be printed on
10 a voucher and entered into the CAT by an employee of the retailer.

 Note that each issued and outstanding pseudo credit card account number may be associated with a unique transaction, in which case the purchasing system device 300 may keep track of available pseudo credit card account numbers. Also note that the redemption code may be associated with either a single retailer or a number of retailers.

15 The purchasing system may associate a spending limit with a pseudo payment identifier, such as a pseudo credit card account number. For example, the purchasing system may arrange for a buyer to take possession of a product at a retailer. The purchasing system may adjusting the spending limit by establishing a minimum spending amount and a maximum spending amount associated with the pseudo payment identifier.
20 These limits may be based on, for example the price the buyer agreed to pay for the product, the price the seller agreed to accept for the product, one or more settlement prices, penalty amounts, and tax amounts. Any supplemental offers may be included in these limits or used to establish additional limits. For example, a pseudo payment identifier may have both a \$100 to \$120 range (associated with the expected final retail price of the
25 product) and a \$180 to \$190 range (associated with the expected final retail price of both the product and a supplemental offer).

 The information related to the attempt to take possession of the product sent from the retailer to the purchasing system may include a purchase price. The purchasing system would then only send a verification if the purchase price is more than the minimum
30 spending amount and less than the maximum spending amount. Moreover, when the buyer takes possession of the product at the retailer, the spending limits may be re-adjusted (e.g., to zero) to prevent the buyer from receiving another authorization.

FIGS. 1A to 20B describe only some of possible embodiments according to the present invention. Several other embodiments will now be briefly described to illustrate various applications of the present invention. These examples are presented only to demonstrate the wide applicability of the present invention. The examples do not constitute a definition of all possible embodiments or all possible applications. Those skilled in the art will understand that there are many more applications of the present invention consistent with the present disclosure. Further, although the following examples are briefly described for clarity, those skilled in the art will understand how to make any changes, if necessary, to the above-described apparatus and methods to accommodate these and other embodiments and applications.

According to one embodiment of the present invention, a retail price override instruction may be a signal generated when a retailer employee activated a button on the POS terminal 450 (instead of from the redemption identifier). Such a manual override may then instruct the retailer device 400 to validate the redemption information. If desired, a price for the product may not be added to the buyer's subtotal until the redemption information has been validated.

According to another embodiment of the present invention, if the buyer does not take possession of the product within a predetermined time, the purchasing system sends an e-mail reminder to the buyer. Alternatively, a POS terminal 450 could output a reminder (e.g., printed on a receipt) if it recognizes that a buyer of a current, unrelated transaction (e.g., by recognizing a credit card number or a frequent shopper number) has an outstanding purchasing system voucher.

Note that the redemption of a voucher does not have to take place at a retailer's or franchisee's store. In an alternate embodiment, the point of redemption could take place at the buyer's home. That is, a delivery service utilizing cellular packaging-tracking technology (e.g. United Parcel Service) may verify redemption codes upon delivery of the product. The buyer may have pre-paid for the product or provide Cash on Delivery (COD). In this embodiment, the POS terminal 410 may be a cellular clip-board device carried by a delivery service employee.

According to another embodiment of the present invention, the buyer may pay an extra amount for the privilege of returning a product purchased through the purchasing system. For example, the customer may pay a \$10 fee to be allowed to return a product to the retailer. The purchasing system may freeze the \$10 amount, and if the customer does

not return the item within 30 days, he or she would get \$8 back (e.g., a “charge back” to the credit card). If the customer does return the item within 30 days, he or she would be charged the full \$10.

According to another embodiment of the present invention, the buyer may pay extra to guarantee that a retailer will have the product in stock. The retailer may, for example, set aside the product for the buyer, perhaps at a customer service counter.

According to another embodiment of the present invention, the buyer may take possession of the product purchased through the purchasing system at a retailer service desk. In this case, a service desk employee may place a telephone call to the purchasing system (e.g., by calling a toll free number).

According to another embodiment of the present invention, a retailer that redeems more than one identical voucher (e.g., when the customer has made an unauthorized copy of a valid voucher) may fund the cost of the product and sacrifice reimbursement. The retailer may in this case maintain a database to track redeemed vouchers to make sure that vouchers are not being duplicated.

According to another embodiment of the present invention, the purchasing system provides a payment to the buyer when the buyer purchases a product. For example, the purchasing system may arrange for the buyer to purchase a product at a first price.

According to this embodiment, the purchasing system would provide a payment to the buyer (e.g., apply a credit to the buyer’s credit card account) based on the difference between a retail price associated with the product and the first price. The buyer would then provide a payment based on the retail price to the retailer when taking possession of the product. Consider a buyer that arranges to purchase a CD player through the purchasing system for \$80. If the CD player has a retail price of \$100, the purchasing system may immediately apply a \$20 credit to the buyer’s credit card account. The purchasing system may also arrange to receive a payment (e.g., of \$20) from another party, such as a seller of the product (including, for example, a retailer or a manufacturer of the product). In this way, the buyer can provide \$100 to a retailer when he or she takes possession of the CD player. As a result, the buyer has purchased the CD player for \$80 (\$100 - \$20).

The present invention has been described in terms of several embodiments solely for the purpose of illustration. Persons skilled in the art will recognize from this description that the invention is not limited to the embodiments described, but may be

practiced with modifications and alterations limited only by the spirit and scope of the appended claims.

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